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100 Chapter 1 Administration

102.4 - Question: I am designing a bathroom with multiple lavatories, do all the lavatories have to meet ADA code?

Answer: No, just one must be meet ADA height.

102.4 - Question: If I change just the lavatory top, not the cabinet, do I have to bring the lavatory height up to ADA code height?

Answer: No, as long as it is just the top, then adjusting the height would not be a requirement.

200 Chapter 2 Definitions

300 Chapter 3 General Regulations

305.5 - Question: Does the water service line need to be sleeved when passing through the foundation wall?

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Answer: Yes, Section 305.5 states "Any Pipe". The sleeve will need to be 2 pipe sizes greater than the pipe passing through the wall and sealed on both sides.

305.5 Pipes through or under footings or foundation walls. Any pipe that passes under a footing or through a foundation wall shall be provided with a relieving arch, or a pipe sleeve pipe shall be built into the foundation wall. The sleeve shall be two pipe sizes greater than the pipe passing through the wall.

Piping installed within or under a footing or foundation wall must be structurally protected from any transferred loading from the footing or foundation wall. This protection may be provided by a relieving arch or a pipe sleeve.

When a sleeve is used, it must be sized to be two pipe sizes larger than the penetrating pipe. For example, a 4-inch (102 mm) penetrating pipe would require a 6-inch (152 mm) sleeve. This space will allow for any differential movement of the pipe. By providing structural protection to the piping system, the piping will not be subjected to undue stresses that could cause it to rupture and leak

308.3 - Question: Can the aluminum duct strap be used for plumbing strap?

Answer: No, Section 308.3 requires that hangers and straps be of approved material. We cannot find a standard for hangers or pipe strap. The definition of "approved" reverts back to the AHJ.

308.3 Materials. Hangers, anchors and supports shall support the piping and the contents of the piping. Hangers and strapping material shall be of approved material that will not promote galvanic action. The hangers and supports for plumbing system piping must be capable of supporting the load imposed by the piping system and not be detrimental to the pipe they support. When the hanger or strapping material is not compatible with the piping material it supports, corrosion caused by galvanic action can occur. This happens when dissimilar metals are in contact with one another and sufficient moisture is present to carry an electrical current. Such corrosion can deteriorate the hanger, anchor or piping to the point of failure.

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Where metallic pipe is installed, the hangers or supports must be of similar material to prevent any corrosive galvanic action. For example, if the water distribution system is copper tubing or copper pipe, copper hangers, straps and clamps are required or such supports must be of a material or clad by a material (such as plastic) that will not react with copper. Some support devices have special plastic coatings or are made entirely of plastic to prevent contact of dissimilar metals and are acceptable alternatives

400 Chapter 4 Fixtures, Faucets & Fittings

403 - Question: I am trying to calculate pool facilities at a new apartment complex in Mecklenburg County. I have used the calculation on the Meckpermit.com web site. The apartment association has submitted a code change that will reduce the number of facilities for apartment pools verses your web site interpretation. The calculation has been approved as submitted to the BCC by Bill Moeller, DOI Chief Plumbing Engineer. May we use the proposed calculation on the apartment pool facilities plans we are submitting for review in Mecklenburg County?

Answer: I ask this question to Bill Moeller, PE, DOI Chief Plumbing Engineer. I am approving the pool facility calculations based on the information supplied by DOI below.

It is our opinion that the local jurisdictions can use the apartment association's code change proposal as a basis for an alternate method to the code, if they see fit to. We support the proposed change and expect it to pass as it is written. If in the unlikely event that the building code council completely rejects the proposal, the owner should understand that adjustments in the fixture count would then have to be made to coincide with the plumbing code.

Bill Moeller

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William H. Moeller, P.E.

Chief Plumbing Code Consultant

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Fax: 919-662-4414

411.1 - Question: Does an eye wash have to have tempered water?

Answer: Yes. 411.1. Emergency showers and eyewash stations shall conform to ISEA Z358.1. This standard says water must be tempered.

412.5 - Question: Are public laundries required to have a floor drain?

Answer: Yes. 412.5. In public coin operated laundries and in the central washing facilities of multiple-family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than three inches.

500 Chapter 5 Water Heaters

600 Chapter 6 Water Supply and Distribution

604.4.1 - Question: Where are metering faucets required?

Answer: They are required in public restrooms with 6 or more lavatories, Education and Assembly occupancies. See code Section 604.4.1 NCPC

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604.4.1 Lavatory faucets. Lavatory faucets shall be of the metering type when located in the following public restrooms:

1. In all occupancies in restrooms which have six or more lavatories.

2. In school occupancies in student-use restrooms.

3. In assembly occupancies in all customer or public-use restrooms.

604.4.1 - Question: Are metering faucets required in a pool house?

Answer: Yes, the pool house restrooms serve an assembly use.

Tommy,

Good to hear from you. Metering faucets are required for the pool house restrooms because they serve an assembly use. I toyed with the idea of business use for assembly occupancy less than 50 but the plumbing fixture table 403.1 is intended to be interpreted more by the description of use. Occupancy types in Table 403.1 are secondary information, not to be used as the only basis for fixture count. The business occupancy can be used for egress and general design of the pool house if the assembly occupancy is less than 50 for the pool house, but not the plumbing fixtures.

Bill Moeller

William H. Moeller, P.E.

Chief Plumbing and Fuel Gas Code Consultant

NCDOI/OSFM Engineering Division

605.3 - Question: A farmer wants to run water to his barn for watering his horses not for human consumption. Can we allow him to run PVC within the barn building?

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Answer: Since the water in the barn is for horses and not human consumption PVC will be acceptable for the distribution piping within the barn.

605.3Water service pipe. Water service pipe shall conform to NSF 61 and shall conform to one of the standards listed in Table 605.3. All water service pipe or tubing, installed underground and outside of the structure, shall have a minimum working pressure rating of 160 psi (1100 kPa) at 73.4ºF (23ºC). Where the water pressure exceeds 160 psi (1100 kPa), piping material shall have a minimum rated working pressure equal to the highest available pressure. Water service piping materials not third-party certified for water distribution shall terminate 5 feet (1524 mm) outside the building. All ductile iron water service piping shall be cement mortar lined in accordance with AWWA C104.

606.2 - Question: I am designing a break room and the client doesn't want to use a cabinet that will allow a front approach to the sink. When is a side approach allowed.

Answer: Section 606.2 Except #1 of A117.1-2009 allows a parallel approach that is centered on the sink and where a cook top or conventional range is not provided. A maximum counter height of 34 inches would still be required.

700 Chapter 7 Sanitary Drainage

701.7 - Question: Can a High Temp Commercial dishwasher, with a rinse temperature of 180 degrees, discharge into the drainage system?

Answer: Section 701.7 of the Plumbing Code states wastewater discharged into the building drainage system shall not be higher than 140 degrees.
Most dishwashers only rinse with 180 degree water and when the water is discharged indirectly, it will be between 130 and 140 degrees when entering the building drain. If the dishwasher states the discharge temperature is higher than

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140 degrees then an approved cooling method must be used, typically a tempering valve.

713.7 - Question: Can a central vacuum pump in a dentist office be connected to the drainage system indirectly?

Answer: No, Section 713.7 requires central vacuum systems to be connected directly to the sanitary drainage system through a trapped waste.

713.7 Central vacuum or disposal systems. Where the waste from a central vacuum (fluid suction) system of the barometric-lag, collection-tank or bottle-disposal type is connected to the drainage system, the waste shall be directly connected to the sanitary drainage system through a trapped waste.

800 Chapter 8 Ind./Special Waste

900 Chapter 9 Vents

905.4 - Question: If I have an island sink or a remote fixture can apply the exception in 905.4 ?

Answer: No, the exception in 905.4 is intended for interceptors and floor drains. Section 913 address venting of island fixtures.

913.1 Limitation. Island fixture venting shall not be permitted for fixtures other than sinks and lavatories. Residential kitchen sinks with a dishwasher waste connection, a food waste grinder, or both, in combination with the kitchen sink waste, shall be permitted to be vented in accordance with this section.

913.2 Vent connection. The island fixture vent shall connect to the fixture drain as required for an individual or common vent. The vent shall rise vertically to above the drainage outlet of the fixture being vented before offsetting horizontally or vertically downward. For multiple island fixture vents, the vent or branch vent

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shall extend to a minimum of 6 inches (152 mm) above the highest island fixture being vented before connecting to the outside vent terminal.

913.3Vent installation below the fixture flood level rim. The vent located below the flood level rim of the fixture being vented shall be installed as required for drainage piping in accordance with Chapter 7, except for sizing. The vent shall be sized in accordance with Section 916.2. The lowest point of the island fixture vent shall connect full size to the drainage system. The connection shall be to a vertical drain pipe or to the top half of a horizontal drain pipe. Cleanouts shall be provided in the island fixture vent to permit rodding of all vent piping located below the flood level rim of the fixtures. Rodding in both directions shall be permitted through a cleanout.

909.4 - Question: In a multi-story wet vent, you usually have the bottom bathroom group connect at the bottom of the stack, after it has turned horizontal. Do you count this bathroom for calculating the size of the multi-story wet vent?

Answer: Yes, unless this bathroom group is vented separately, it would be calculated in the wet vent size calculation.

917.8 - Question: Does the IPC allow AAV's, to vent pumps or pump holding tanks of any kind?

Answer: NO. Air admittance valves shall not be installed in non-neutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves without an engineered design shall not be utilized to vent sumps or tanks of any type. 917.8 Prohibited installations.

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air

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admittance valves without an engineered design shall not be utilized to vent sumps or tanks of any type.

1000 Chapter 10 Traps and Interceptors

1100 Chapter 11 Storm Drainage

1103 - Question: Are drains for storm water on a parking deck required to be trapped?

Answer: Traps are required on storm drains only when connected to a combined sewer system.

1103.1 Main trap. Leaders and storm drains connected to a combined sewer shall be trapped. Individual storm water traps shall be installed on the storm water drain branch serving each conductor, or a single trap shall be installed in the main storm drain just before its connection with the combined building sewer or the public sewer.

1105 - Question: We want to install both the primary and secondary roof drains below a paver system on the roof. The drains will be in a course fill material so there will be very little chance of the drains clogging. We have installed this system in other parts of the county and it has worked well. The plan examiner has turned the drain system down. We are looking to the Plumbing code administrator for approval of the system. See the drawings of the system in the attached PDF to this email. Can this system be approved in Mecklenburg County?

Answer: No. The roof drains and overflow drains or scuppers are required to be located on the surface of the roof. For your project the primary and overflow drains shall be installed at the paver level. The code requires ready access in case of a clog to the drains. The water from overflow drains or scuppers shall be in a visible location so building maintenance personnel can see there is a

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primary drain clog and have ready access to remove the clog.

Appendix

Policy

ADA - Question: We are in the process of up fitting several floors of a High Rise Building. The building has one drinking fountain on each floor which meets the minimum code for fixture count. We are fulfilling the handicap requirements by making the drinking fountain on one floor meet the requirements for the High HCDF and the one on the floor below will meet the Low HCDF requirements. The code does not address this issue. Will this installation be approved?

Answer: This issue was sent to Laurel Wright, HC Accessibility authority at DOI. She addressed the situation with the following comments.

From: Wright, Laurel [mailto:Laurel.Wright@ncdoi.gov]

Sent: Monday, November 25, 2013 10:59 AM

To: Horton, Willis

Cc: Barkley, John; McSwain, Lon; jsang@redlinedg.com; Moeller, Bill; Gupton, Barry

Subject: NCPC Table 403.1 - #336197 Salsarita's RTAP

Good afternoon Willis,

There are several thoughts here - it has been standard practice here to permit a hi-low drinking fountain to be separated when installed, thus allowing it in two different locations, so long as signage is also provided with each drinking fountain

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which directs travel to the other fountain. A minimum of one hi-low drinking fountain per floor is required (when required by the NC Plumbing Code).

Thoughts relating to the provided documentation (attached), which did not reference any specific project however, are slightly different. The issue was discussed at length with Bill Moeller, our Chief Plumbing Code Consultant, and verified with Barry Gupton, our Chief Building Code Consultant. Our thoughts are as follows:

1. The attached reference is from the 2006 International Building Code Commentary for IBC Chapter 11.

[It took a while to find since the year edition did not show up on the copied page.]

2. The section hi-lited contains a reference to what would have been the 2009 NCPC 403.5.

This section was never enforced by NC since the NC Building Code Council modified the language.

3. 2009 NCPC 403.5 was amended by NC to read as follows:

4. NC is currently under the 2012 Building Codes, not the 2009 edition.

5. 2012 NCPC 403.5 was amended by NC to read as follows:

The language of the 2009 and the 2012 is identical. However, the references are consistently to toilet facilities. There are no references to drinking fountains in NCBC 403.5.

6. The language in NCPC 403.5 addresses travel distance to toilet facilities, not travel distance to drinking

fountains. NCPC Table 403.1 assigns drinking fountain requirements based on the occupancy of a

building area, which is typically evaluated on a floor-by-floor basis. The installation of the drinking

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fountains should be installed accordingly.

7. Please note that NCBC 1109.5 also includes requirements for drinking fountains, including NCBC

1109.5.2, where more than the minimum number of drinking fountains are provided.

8. Distribution of hi-low drinking fountains throughout a building shall typically follow this procedure:

a. A minimum of one hi-low drinking fountain shall be installed on each floor level, when drinking

fountains are required by the NC Plumbing Code.

b. Hi-low drinking fountains may be separated when installed, provided signage is provided with

directions locating the other fountain.

c. Drinking fountains shall be installed to serve in the areas where they are required per NCBC Table

403.1.

A copy of the 2009 IBC Commentary for IBC 1109.5 is attached.

If I can be of additional assistance, please let me know.

Laurel W. Wright

Chief Accessibility Code Consultant

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Mbr: ANSI A117.1 Committee

Laurel,

Thank you for the information and research you did to answer this email. I will contact the designer and let him know the two drinking fountains (one high and one low) are required to be on the same floor but may be separated with proper travel distance, signage and accessible path.

Policy - Question: We have gained approval for our Gindy pipe material for Refrigeration, Water and Gas piping through the ICC-ES testing service. This testing service is recognized by the Department of Insurance as an approved testing agency for material and systems in the ICC Codes. Some area contractors still do not agree that we have approval for these products. May we get a letter from Mecklenburg County Code Enforcement approving these products as tested by ICC-ES.

Answer: The department has approved the products per the test data forms submitted and sent a letter to acknowledge the product approval to Gindy. Any contractor, designer or code official wishing to obtain a copy can contact the Mechanical/Plumbing Code Administrator for a copy.

Policy - Question: Who looks at the condensate for a condensing water heater?

Answer: The Mechanical inspector, the condensate comes off the flue and usually goes to the floor drain or other approved location. Almost all of the condensing water heaters and condensing gas furnaces researched stated that the condensate would be slightly acidic with a pH from 3 to 5.

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CMUD's policy requires waste to be between 6 and 12 pH when entering the system. If the manufacture's data states a pH lower than 6, then a neutralizing filter is required for condensate waste discharging to the drainage system or outside the structure.

Policy - Question: I was asked this question by CMUD. Does Mecklenburg County have any written procedures for abandoning in-ground grease traps? If not, I came up with the attached guidelines and would like for you to review and make corrections or revise.

Answer: There are no requirements in the 2012 NC Plumbing code for Code Enforcement to inspect abandoned grease interceptors. You may want to contact the wastewater division for Mecklenburg County, David Hill, 704-663-1699, to see if they have any rules or regulations about
abandoned Grease Interceptors.

Policy - Question: Do we issue permits for Fire Lines?

Answer: No, only the Fire reviewer, Fire inspector and backflow look at fire lines. They are not potable water and are not under the jurisdiction of the Plumbing code. If it is a combo line, then we would look at it, because it also serves the potable water system.

Policy - Question: The inspector in another County would not allow me to use tee's on their back in an indirect drainage system. He could not find any justification for the inspectors call in the code. Would this installation be approved in Mecklenburg County?

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Answer: Whether the installation is direct or indirect if it is part of the plumbing system it should meet the code.

Other

Manufacture's Installation - Question: A contractor has stated that some inspectors are requiring nail guards behind the shower pan liner if the pipes are close to the front of the framing. Does this not violate the manufacture's installation instructions?

Answer: Nail guards are not required behind the shower pan liner.

1. The nail guard itself will damage the liner.
2. There should be no nails or screws in the liner area.

403.4 (Energy) - Question: What is the insulation requirements for existing structures that add a small hot water recirculation system such as a Grundfos? What water lines must be insulated?

Answer: Section 403.4 of the Energy Code requires all circulating service hot water piping to be insulated to at least R-2. Our interpretation for existing structures is any exposed piping such as in a crawl space would need to be insulated to a minimum of R-2. Piping in the walls or concealed spaces would not be required to be insulated with the installation of a hot water recirculation system. Please note that Section 403.4 NCECC is for residential only; Commercial installation at this time will have to be handled on a case by case basis.
Some pipe materials such as PEX have enough thermal resistance to meet the R value requirements of 403.4 (Residential) and 504.5 (Commercial). Attached for reference are engineering letters we have on file for certain brands of PEX. If the pipe manufacturer or an engineer can provide documentation that the pipe's

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thermal resistance will meet the energy code, no additional pipe insulation would be required in regards to sections 403.4 and 504.5 only.

403.4 Circulating hot water systems (Mandatory Requirements). All circulating service hot water piping shall be insulated to at least R-2. Circulating hot water systems shall include an automatic or readily accessible manual switch that can turn off the hot water circulating pump when the system is not in use.

504.5 Pipe insulation. For automatic-circulating hot water systems, piping shall be insulated with 1 inch (25 mm) of insulation having a conductivity not exceeding 0.27 Btu per inch/h × ft2 × °F (1.53 W per 25 mm/m2 × K). The first 8 feet (2438 mm) of piping in no circulating systems served by equipment without integral heat traps shall be insulated with 0.5 inch (12.7 mm) of material having a conductivity not exceeding 0.27 Btu per inch/h × ft2 × °F (1.53 W per 25 mm/m2 × K).

Building Code - Question: A tenant upfit for a restaurant is installed on the first floor of a High Rise Building. The tenant plumbing contractor installs a vent riser in the corner of an exit star because he says there is no vent riser he can tie the restaurant venting to on the first floor. Is this an acceptable alternative?

Answer: NO. The building code will not allow the installation because nothing can be in a rated stairwell except equipment for the stairwell itself. Clearly the vent riser is not for the stairwell and is therefore disapproved as a means of venting the restaurant.